Claim 1 was rejected by the Examiner under 35 U.S.C. 103(a) as being unpatentable over Bartlett et al. (U.S. patent No. 6,263,382), Benmohamed et al. (U.S. Patent No. 6,240,463), Hayashi et al. (U.S. Patent No. 5,857,195), and Ong (U.S. Patent No. 5,815,662).

The Examiner indicated that Bartlett et al. rendered obvious independent claim 1 by the following:

"...obtaining at least one user defined workload requirement..." at col. 3, lines 19-21; and

"...of said user defined workload requirement..." at col. 3, lines 19-21.

However, the Examiner stated that Benmohamed teaches the calculation and display of requirements and the use of functions by the following:

"...calculating the...requirements..." at col. 12, lines 30-34;

"...as a function..." at col. 4, lines 49-53; and

"...displaying...requirements..." at col. 13, lines 25-28.

The sentence in column 12, lines 30-34, is: "Given the above-derived equations, the following are various embodiments of methodologies of the invention for calculating link capacity requirements relevant to the particular design criteria selected by the user of the network design system of the invention."

The sentence in column 4, lines 49-53, is: "The output of the routing processor 12, denoted by reference designation A in FIG.

1, is routing information as a function of the demand flow and network topology, that is, the flow (traffic) found on each link or the f_i's passing through each link."

The sentence in column 13, lines 25-28, is: "Lastly, the link capacity requirements (denoted as reference designation B in FIG. 1) for each link of the current topology are output to the user via, for example, a display associated with the processor 14."

The Examiner added that it would have been obvious to one ordinarily skilled in the art at the time of the invention to use the user input to calculate hardware requirements using mathematical equations or functions and then displaying the results of these calculations to the users in order to provide a system, which processes user input and provides feedback to the users on the effects of the input data on hardware models.

The Applicant notes that Benmohamed et al. disclose methods and apparatus for designing IP (internet protocol) networks with substantially improved performance as compared to existing IP networks such as, for example, those networks designed under best-effort criteria. They include includes methods and apparatus for: computing worst-case and optimistic link capacity requirements; optimizing network topology; and determining router placement within a network. The present invention of claim 1 does not deal with internet protocol networks.

The Examiner said that Hayashi teaches the use of database management systems in the following:

"...database management system..." at col. 1, lines 29-33; and

"...said database management system..." at col. 1, lines 29-33.

The Examiner said, "It would have been obvious to one ordinarily skilled in the art at the time of the invention to use database management system (DBMS) requirements as requirements for a system in order to provide a standard method for using a computer system to store data and gain acceptance for the method of determining hardware requirements."

The Examiner indicated that Ong teaches the use of server hardware requirements by the following language:

"...server hardware requirements..." at col. 3, lines 10-15.

The sentence in column 3, lines 10-15, is: "Thus, multiple requests for the same media program within a short time of each other, such as a popular title during Prime Time, can be handled with a minimum of accesses to the data storage device and with the minimum server hardware requirements and costs."

The Examiner said that it would have been obvious to one ordinarily skilled in the art at the time of the invention to use server hardware requirements in the specification of a computer system in order to provide requirements for the hardware components contain the database management system software, which processes query requests to databases and

provides interface access for these queries and then returns the results of these queries to the users.

It seems incorrect to the Applicant that one may find a reference and extract words from it appearing to replicate a portion of an element of a claim without regard to the context of the words, without clearly stating the suggestion or motivation for combining the reference, and yet state that it would be obvious to one ordinarily skilled in the art at the time of the invention to do what is indicated by the extracted words in combination with other portions of the element similarly extracted from other references combined in the same fashion to support with that element a rejection of the claim.

Claim 8 was rejected by the Examiner under 35 U.S.C. 103(a) as being unpatentable over Bartlett, Friedrich et al. (U.S. Patent No. 5,276,877), Culley (U.S. Patent No. 5,125,088), and Garofalakis et al. (U.S. Patent No. 5,845,279), and Benmohamed. The Examiner indicated that Bartlett rendered obvious independent claim 8 by the following language:

"...obtaining at least one input from a user..." at col. 3, lines 19-21; and

"...obtaining from said user..." at col. 3, lines 19-21.

The sentence in column 3, lines 19-21, is: "The framework generates user-requested reports specific to system

recommendations and attendant workload characteristics specified by the user."

The Examiner stated that Friedrich teaches the use of transactions and the use of workload contributions as follows:

"...a plurality of transactions..." at col. 11, lines 44-52;

"...wherein each of said transactions have..." at col. 11, lines 44-52;

"...a transaction..." at col. 11, lines 44-52;

"...workload contribution..." at col. 26, lines 18-23;

"...calculating a total workload..." at col. 19, lines 29-32;

"...transaction..." at col. 11, lines 44-52;

"...workload contribution..." at col. 26, lines 18-23;

"...and transaction..." at col. 11, lines 44-52; and

"...of said transactions..." at col. 11, lines 44-52.

Lines 37-54 of column 11, including lines 44-52, state:

> "Workload distribution involves branching probabilities. As explained above, branching probability is a percentage of work supplied by a device for a given workload. Before solving a model, the branching probability for each workload must equal 100%. The probabilities can either be FIXED at a specific value or FLOATING. FLOATING probabilities can be adjusted to ensure that the sum of all related branching probabilities equals 100%. The balancing mode recalculations only affect the probabilities that are FLOATING. (Col. 11, lines 37-47.)
>
> In the preferred implementation, a workload on a device such as a CPU or disk can be apportioned among other devices in a set of devices in two different ways. The relevant set of devices is those which can supply a greater or

lesser amount of system resources to a particular workload. The set of devices would not include those with a FIXED probability." (Col. 11, lines 48-54.)

The sentence in lines 18-23 of column 26, is:

"Once that identification is received (Step 2663), changer 330 accesses all of the workloads to which the indicated user group contributes, and adjusts the workloads by the indicated percentage proportionate to the identified user group's contribution to the workload (Step 2666)."

The sentence in lines 29-32 of column 19 is:

"To determine the total amount of system resources which disk1 provides for workload1, the branching probability for disk1, 30%, has to be multiplied by the branching probability for CPU1, 80%."

The Examiner said that it would have been obvious to one ordinarily skilled in the art at the time of the invention to use transactions as basic units of processor throughput in order to use standard quantifiable units. The Examiner added that, likewise, it would have been obvious to one ordinarily skilled in the art at the time of the invention to use the workload contribution of these transactions in order to differentiate between the various inputs used to determine the processing capability of a computer system.

The Examiner indicated that Culley teaches the use of expected execution rates in the following excerpts:

"...and an expected execution rate per second..." at col. 19, lines 55-62; and

"...execution rate..." at col. 19, lines 55-62.

"Thus as software written for an older generation machine is adapted for a faster new generation machine it becomes difficult to use the copy-protected software in the new generation machine because the software which was written to execute in a slower machine is expecting a particular execution rate which was determined by the slower clock rate."

The Examiner indicated that it would have been obvious to one ordinarily skilled in the art at the time of the invention to use expected execution rates in order to define a model for a baseline computer system and compare the baseline model with the actual results obtained.

The Examiner said that Garovalakis teaches calculating total workloads as follows:

"...calculating...as a function..." at col. 8, lines 6-8 and col. 8, lines 24-28; and

"...said total workload..." at col. 14, lines 27-29.

The sentence in lines 6-8 of column 8 is: "This loss is calculated as the total value of all periods whose candidate sets become empty after the placement of n_i under M."

The sentence in lines 24-28 of column 8 is:

> 1. Input: A set of simple periodic tasks C = $\{C_1$, . . . , $C_N\}$ and $1_i \leq n_{disk}$. T with corresponding periods P = $\{n_1$, . . . , $n_N\}$, and a value () function assigning a value to each C_i.
> Output: A scheduling tree Γ for a subset C' of C.
> (Goal: Maximize $\sum C_i \varepsilon$ C' value (C_i).)

The sentence in lines 27-29 of column 14 is: "Thus when the hot region becomes smaller the relative value of the scheduled subset (as compared to the total workload value) decreases."

The Examiner said that it would have been obvious to one ordinarily skilled in the art at the time of the invention to calculate total workloads in order to determine the workload on a computer system, which is defined as the total contribution of all the transactions used in this model.

The Examiner indicated that Benmohamed teaches displaying the results of the calculations to users in the language of: "...and display...to said human user " at col. 13, lines 25-28. The sentence in lines 25-28 of column 13 is: "Lastly, the link capacity requirements (denoted as reference designation B in FIG. 1) for each link of the current topology are output to the user via, for example, a display associated with the processor 14."

The Examiner indicated that it would have been obvious to one ordinarily skilled in the art at the time of the invention to display the results of calculations to the users in order to

provide feedback to the users on the effects of the input data on hardware models.

Again, it seems incorrect to the Applicant that one may find a reference and extract words from it appearing to replicate a portion of an element of a claim without regard to the context of the words, without clearly stating the suggestion or motivation for combining the reference, and yet state that it would be obvious to one ordinarily skilled in the art at the time of the invention to do what is indicated by the extracted words in combination with other portions of the element similarly extracted from other references combined in the same fashion to support with that element a rejection of the claim.

The Examiner indicated that the Applicant's arguments were fully considered but were not persuasive. The Examiner stated, "The combined the teaching of Bartlett, Benmohamed, Hayashi, and Ong are used to reject independent claim 1. Bartlett, Benmohamed, Hayashi, and Ong use several elements in common. Bartlett, Benmohamed, Hayashi, and Ong teach having requirements, the utilization of resources, and using user inputs, Bartlett, Benmohamed, and Ong teach the use of software, the use of computer memory, the use of networks, the use of the Internet, and the use of models, and Bartlett, Hayashi, and Ong teach the use of tables and the processing of data."

The Examiner also said, "The combined teachings of Bartlett, Friedrich, Culley, Garofalakis, and Benmohamed are used to reject independent claim 8. Bartlett, Friedrich, Culley, Garofalakis, and Benmohamed use several elements in common. Bartlett, Friedrich, Culley, Garofalakis, and Benmohamed teach the use of software, the use of computer memory, and the utilization of resources, Bartlett, Friedrich, Garofalakis, and Benmohamed teach the use of networks and the use of models, Bartlett, Culley, Garofalakis, and Benmohamed teach having requirements, Bartlett, Friedrich, and Culley teach the use of hardware, Bartlett, Friedrich, and Garofalakis teach the use of servers, and Bartlett, Friedrich, and Benmohamed teach the use of user input."

As to the Examiner's statement relative to claim 1, the Examiner combined Bartlett, Benmohamed, Hayashi and Ong, designated as (1), together because of their indicated common elements of having requirements, the utilization of resources and using user inputs. The common elements appear to be very generic, even in the context of computers. To the Applicant, that commonality is at such a high level of generality that many patents in many disciplines could be part of that group and yet have little relevancy to the claimed invention. The same concern applies to the use of software, the use of computer memory, the use of networks, the use of the Internet, and the

use of models which were indicated to be common to Bartlett, Benmohamed and Ong, (2); and the use of tables and processing of data which were indicated to be common to Bartlett, Hayashi and Ong, (3).

Relative to the rejection of claim 8, the Examiner appeared to do the same kind of combining of the references. The use of software, the use of computer memory and the utilization of resources were indicated to be common to Bartlett, Friedrich, Culley, Garofalakis and Benmohamed, (4); the use of networks and the use of models were indicated to be common to Bartlett, Friedrich, Garofalakis and Benmohamed, (5); the having requirements was indicated to be common to Bartlett, Culley, Garofalakis and Benmohamed, (6); the use of hardware was indicated to be common to Bartlett, Friedrich and Culley, (7); the use of servers was indicated to be common to Bartlett, Friedrich and Garofalakis, (8); and the use of user input was indicated to be common to Bartlett, Friedrich and Benmohamed, (9). The concern here is the same relative to the combining of the references in the rejection of claim 1.

If one were to search the patent database back to 1976, with an assumption that the patents to be cited are somehow related to computers and that the common elements that allegedly justified the combining the cited patents were search terms, the results for the various combinations of the taught elements

would be rather large. "Computer" should be an included term to prevent absurd results. The numbers in parentheses correspond to the respective combining of patents above. For examples, searching: (1) the common elements of requirements, resources, user inputs and computer may result in 565 patents; (2) the common elements of software, computer memory, networks, Internet and models may result in 192 patents; (3) the common elements of tables, processing data and computer may result in 4393 patents; (4) the common elements of software, computer memory, resources and computer may result in 2559 patents; (5) the common elements of networks, models and computer may result in 6303 patents; (6) the common elements of requirements and computer may result in 92,389 patents; (7) the common elements of hardware and computer may result in 92,423 patents; (8) the common elements of servers and computer may result in 14,180 patents; and (9) the common elements of user input and computer may result 16,767 patents.

One might say that the "use of" may be needed to more accurately reflect the elements. First, it is implicit that the elements being mentioned are being used, if disclosed in the reference. Second, search on the "use of something", even if "something" is in the art being searched, does not appear to work. For example, the element in common for combining the teachings of Bartlett, Friedrich and Garofalakis, the "use of servers" would result in zero patents whereas "user server" may

result in 665 patents, which is still a very high number of patents to have such common element. With the term computer added as a common element with "user server", the search may result in 611 patents. A more restrictive term "server usage" along with computer may result in 49 patents. Use of something may be expressed in numerous ways, so a search with the term "something usage" would miss many patents relating to the use of "something". Thus, the commonality of elements, as indicated above, may result in very many patents. Searching about the use of an element would require a large variety of search terms in various arrangements to find a significant portion of patents expressing use of a particular element. Thus, the commonality of elements, as indicated above, may result in very many patents. So perhaps one might use another basis for a combining of teachings of several patents such as clear motivation or suggestion in the art.

The rejection of claim 1 under 35 U.S.C. 103(a) as being unpatentable over Bartlett et al., Benmohamed et al., Hayashi et al. and Ong, and the rejection of claim 8 under 35 U.S.C. 103(a) as being unpatentable over Bartlett, Friedrich et al., Culley, and Garofalakis et al. and Benmohamed, seem to be based on words or phrases picked out of the various references to fit the template of the invention without the necessary motivation or suggestion to make the claimed invention. This also appeared to

be the approach relative to the rejected dependent claims. In Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc., 230 USPQ 416 (Fed. Cir. 1986), cert denied, 484 US 823 (1987), on remand, 10 USPQ2d 1929 (N.D. Calif. 1989), the Federal Circuit held that a single line in a prior art reference should not be taken out of context and relied upon with the benefit of hindsight to show obviousness. Rather, a reference should be considered as a whole, and portions arguing against or teaching away from the claimed invention must be considered. The court has also ruled that "it is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art. In re Wesslau, 147 USPQ 391, at 393 (CCPA 1965).

After reviewing the Examiner's rejections, it appears that the Examiner is using the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious. The court has frequently indicated, however, that "'[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.' (quoting In re Fine, 837 F.2d 1071, 1075, 5 USPQ 2d 1596, 1600 (Fed. Cir. 1988)." In re Fritch, 23 USPQ 2d 1780,

1783-84 (Fed. Cir. 1992). Other cited information of a previous amendment in the present application is incorporated herein by reference. Since no art cited against claims 1 and 16 appears to provide suggestion or motivation for making the claimed combination 35 U.S.C 103(a), the Applicant believes that claims 1 and 16 are patentable over the cited art. The Applicant believes that the same applies to the dependent claims rejected under 35 U.S.C. 103(a).

Reconsideration and allowance of the pending claims are very respectfully requested. Also, the Applicant's representative would appreciate it if the Examiner would care to call him (direct no.: 612/333-1847) to discuss the present application.

Respectfully submitted,

John Quernemoen

By his attorney,

Date: 2/12/03

John G. Shudy, Jr., Reg. No. 31,214
CROMPTON, SEAGER & TUFTE, LLC
1221 Nicollet Avenue, Suite 800
Minneapolis, Minnesota 55403-2420
Telephone: (612) 677-9050
Facsimile: (612) 359-9349